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A NEW SPECIES OF *ACAMPTOPOEUM* FROM COLOMBIA (HYMENOPTERA: ANDRENIDAE: PANURGINAE)

Una nueva especie de *Acamptopoeum* de Colombia (Hymenoptera: Andrenidae: Panurginae)

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ABSTRACT

A new species of the panurginae bee genus *Acamptopoeum* (Andrenidae: Calliopsini), from a xeric highland area in the Eastern Andes of Colombia is described and illustrated. *Acamptopoeum fernandezi* **sp. nov**., can be recognized by the black integument without blue or green reflections and the short, sparse white pubescence on the body, not forming apical bands of setae on metasoma. *A. prinii* is also reported for the first time for Colombia.

Key words. Apoidea, *Acamptopoeum*, taxonomy, Andes, Colombia.

RESUMEN

Se describe una nueva especie de abejas panurginas del género *Acamptopoeum* (Andrenidae: Calliopsini) de una región árida altoandina de la cordillera Oriental de Colombia. *Acamptopoeum fernandezi* **sp. nov**., puede reconocerse por el integumento negro sin brillos azules o verdes y la pubescencia corta y rala del cuerpo, sin formar bandas apicales de sedas en el metasoma. También se registra *A. prinii* por primera vez para Colombia.

Palabras clave. Apoidea, *Acamptopoeum*, taxonomía, Andes, Colombia.

INTRODUCTION

Bees in the tribe Calliopsini (Andrenidae, Panurginae) are very diverse and abundant in temperate areas of North and South America, especially xeric areas, but nearly absent to poorly represented in the wet tropics (Michener 2000). The Calliopsini genus *Acamptopoeum* Cockerell is widely spread in South America, ranging from Argentina and Chile to Colombia (Michener 2000). Species of this genus resemble *Calliopsis* s. str. Smith from which they can be separated by the inner orbits converging below, labrum with strong transverse salient, bands of setae on premarginal areas of metasomal terga (sometimes absent in males), middle tibial spur of females coarsely toothed and sting surpassing stylus, truncate at apex (Ruz 1991). As in other Calliopsini, nests of *Acamptopoeum* are built in flat ground, usually in barren areas well exposed to sun; nests are shallow with meandering tunnels and laterals that lead to single subhorizontal cells; laterals are soil-filled after cell closure (Rozen & Yanega 1999). There are eight described species in *Acamptopoeum* which can be effectively separated using Shinn's (1965) key. In Colombia, *Acamptopoeum* species are rarely collected and practically absent in collections; to date, two species have been reported: *A. submetallicum* (Spinola, 1851) and *A. colombiensis* Shinn, 1965, the latter only known from the type specimens collected in northern Colombia (Ciénaga and Santa Marta, Magdalena) (Shinn 1965, Smith-Pardo 2003). Herein, I describe a new species of *Acamptopoeum* from a high xeric area in the Eastern Andes of Colombia and report *A. prinii* (Holmberg 1884) as new to the country.

MATERIALS AND METHODS

The morphological description and illustrations were made using an Olympus SZ microscope. The description format and morphological terminology generally follow Ruz (1991) and terminology for surface sculpturing follows Harris (1979). Setae length is given relative to the diameter of median ocellus. The abbreviations F, S, OD, and T are used for flagellomere, metasomal sternum, ocellar diameter, and metasomal tergum, respectively. The novelty of the species described here was confirmed by comparison with specimens of other *Acamptopoeum* species deposited at Snow Entomological Collection, Entomology Division, Natural History Museum, University of Kansas, Lawrence, Kansas, USA.

RESULTS

***Acamptopoeum fernandezi* González, new species**

Diagnosis. This species can be recognized by the black integument without blue or green reflections and the short, sparse and mainly white pubescence on the body, not forming apical bands of setae on metasoma.

Description. Male. Body length 7.69 mm; forewing length 5.69 mm. Head 1.5 times as wide as long; inner orbits converging below; interalveolar distance as broad as interocellar distance, slightly broader than alveolorbital distance; ocellocular distance about three times greater than median ocellus diameter; ocelloccipital distance about as broad as interocellar distance and about three times greater than distance between median to lateral ocellus; compound eye twice as long as wide; clypeus projecting about one third of compound eye width in lateral view; gena slightly broader than half of compound eye width in profile; antennal flagellum about 0.8 times length head width; scape three times longer than broad, F1–F3 as broad as long, individually about same length and width; frontal line with upper part in a shallow groove, lower part (little more than half of total length) a well-marked carina reaching interalveolar area. Genitalia and associated sterna as in Fig. 1A–B, D–F. *Coloration*. Mainly black, except for the following parts yellow: anterior face of scape, outer surface of flagellum yellowish (inner surface dark brown); clypeus, except for apical margin dark brown and two brown spots on disc, supraclypeal area, subantennal area, and lower paraocular area, on latter progressively tapering towards vertex, ending just above antennal socket, base of labrum and about two thirds of outer surface of mandible (Fig. 1C), and apex of dorsal surface of front and middle femora. Outer surface of front tibia, except for a diffuse spot in center and posterior margin dark brown; middle tibia with a yellow spot on base and along anterior margin; front basitarsus with outer surface yellow, middle basitarsus yellowish on base and apex of outer surface; mediotarsi, distitarsi and pretarsal claws of all legs ferrugineous, lighter on front legs. Tegula with disc translucent brownish, dark brown to black on inner margin. Wings translucent ferruginous with weak coppery-green highlights, veins dark brown. Apical margin of T1–T5 (more conspicuous on T5) and sterna translucent brownish. *Pubescence*. Mainly white and very sparse. Apical margin of labrum with long (> OD), stout, simple ferruginous setae; clypeus, lower paraocular area, subantennal area and frons with long (> 2 OD), sparse, minutely branched white setae, longest on latter; scape with long ferruginous setae, twice as long as maximum diameter of scape; ocellar area and vertex mostly with short (= OD), sparse ferruginous setae, longest setae (> OD) along preoccipital ridge; gena with long (> 2 OD), sparse whitish setae, longest on lower gena. Mesosoma with long (about 2 OD), sparse, branched white setae as on gena, denser on anterolateral sides of mesoscutum and ventral side of mesepisternum, disc of mesoscutum mostly bare. Front and middle tibiae and tarsi with ferruginous setae, hind tibia and tarsi with whitish to pale ferruginous setae. T1–T5 with short (about half OD), semierect, branched, sparse ferruginous setae, longest on T1; apical margin of T1–T5 with very short, adpressed, sparse branched whitish setae, without forming conspicuous apical bands of setae. S1 with long (about 2 OD), sparse, branched whitish setae; S2–S5 with long (> OD), sparse ferruginous setae, longer towards apical margin, except medioapical margin of S3–S5 bare. *Punctation*. Head with integument smooth and shiny between punctures. Clypeus and lower paraocular area with faint punctures, separated by 1–2 puncture widths as on gena, closer and stronger towards clypeal base as on subantennal area; stronger and almost contiguous on frons and vertex; facial fovea about twice as long as broad (length > OD), barely indicated by a shallow, smooth, depressed area. Anterolateral sides of mesoscutum with finer punctures, almost contiguous; disc of mesoscutum, metanotum and scutellum with scattered punctures (1–2 puncture widths); mesepisternum with sparser punctures than mesoscutum (2–3 puncture widths), ventral side with integument weakly imbricate between punctures as on legs, sterna and lateral sides of terga. Metasomal terga with fine and close punctures (= 1 puncture widths), integument between punctures smooth and shiny; premarginal areas of terga and sterna with sparser punctures, 2–3 puncture widths.

Holotype. ♂ **COLOMBIA. Boyacá**: Villa de Leyva, El Infiernito [5° 37’ 60’’ N, 73° 34’ W], 31 December 2001, 2100 m, *J. Rosso* [deposited in the Laboratorio de Investigaciones en Abejas, Universidad Nacional de Colombia (LABUN), Bogotá, (Guiomar Nates-Parra)].

ETYMOLOGY. The specific name is a patronymic honoring Fernando Fernández, Universidad Nacional de Colombia (Bogotá), for all his efforts in promoting the study of Colombia’s Hymenoptera fauna.

COMMENTS. The new species runs to couple 6 in the Shinn’s (1965) key to species and there runs out to the widespread *A. prinii*. However, the new species differs from *A. prinii*, besides the characters given in the diagnosis, by the shape of the dorsal projection of the gonocoxite in the genitalia. In *A. fernandezi* this projection is somewhat pointed (apical angle about 45°), almost digitiform (Fig. 1G) whereas in *A. prinii* such projection has a more rectangular shape (60°) (Fig. 1H). In addition, the pigidial area of T6 in *A. prinii* is laterally covered with dense, branched, short, adpressed and mostly ferruginous setae than in *A. fernandezi*.

A. fernandezi occurs in a xeric area of the Eastern Andes; such environments are interesting because they represent “biogeographic islands” usually separated from one another by expanses of cloud forests and they are likely to contain a diverse fauna, according to Michener’s hypothesis (Michener 1979) on high bee diversity in warm-temperate and xeric areas of the world.

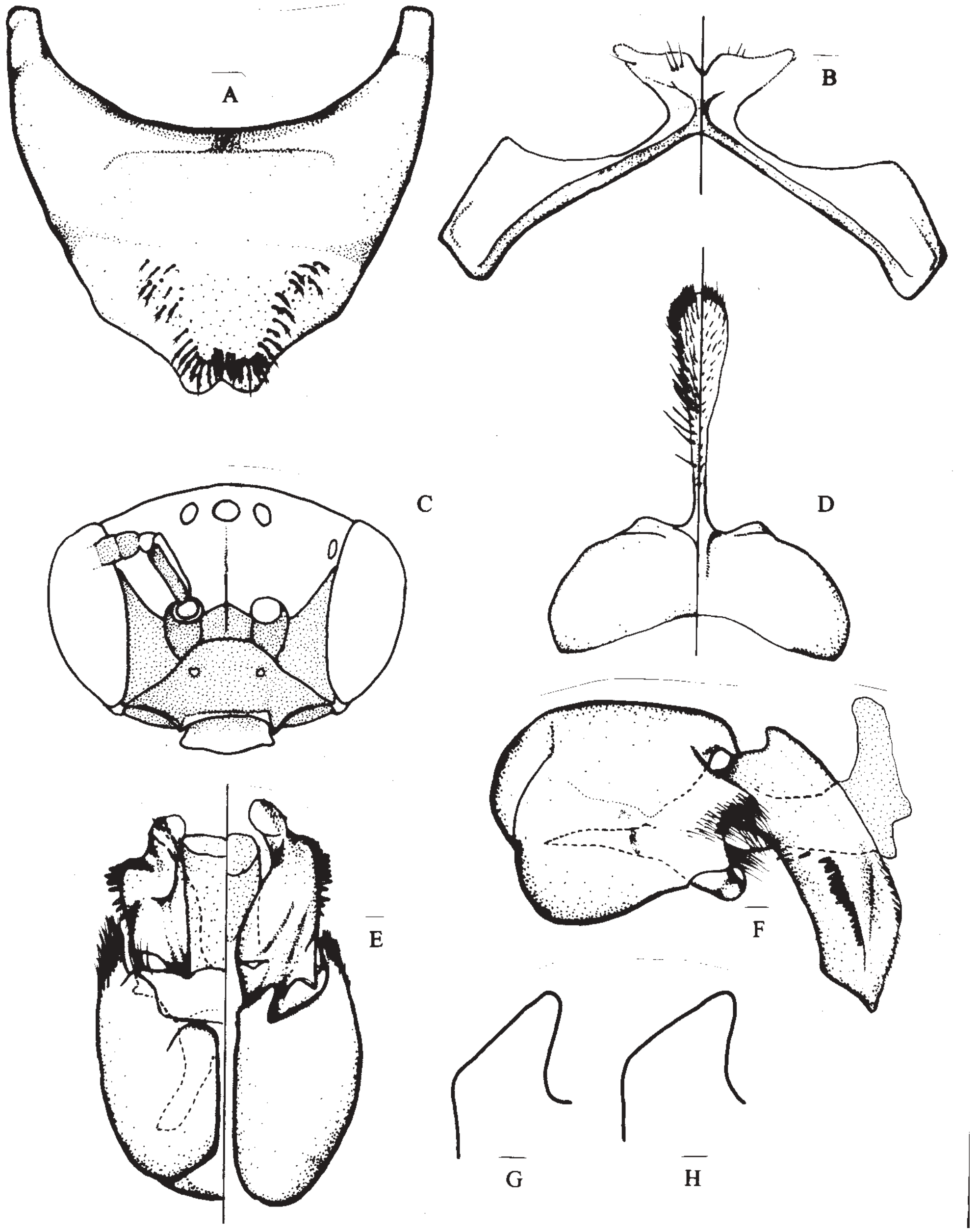

Fig. 1. Male of *A. fernandezi* n. sp. A = S6, ventral view; B, D = S7–S8, ventral and dorsal views; C = face showing integumental color. Stippling indicates yellow, remainder black; pubescence omitted; E, F = Genital capsule, ventral (left), dorsal (right) and side views; G and H, detail of the dorsal projection of gonocoxite of *A. fernandezi* and *A. prinii*, respectively.

These areas, however, are poorly sampled and their bee fauna largely unknown.

Finally, *A. prinii* is reported for the first time (see below) from eastern lowland forests of Colombia (Orinoquía region) and therefore these species can be added to the updated list of Colombian bees by Smith-Pardo (2003).

New Records of *A. prinii* for Colombia. **Casanare**: 1♀, Villanueva [4° 47' 60'' N, 72° 34' 60'' W, 250 m], Caño Agua Clara, October 22 1984, *O. Cepeda* # 4431; **Cundinamarca**: 1♂, Medina [4° 30' N, 73° 20' 60'' W, 400 m], September 20 1977, *C. Vergara*, # 4452 [LABUN].

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